

Smoking and Lung Cancer



Objectives

- Students should be able to identify some of the other consequences of smoking other than lung cancer
- Students should be able to identify the effects of the chemicals in cigarettes
- Students should be able to identify some causes of lung cancer
- Students should be able to identify ways to prevent lung cancer

Smoking

- Smoking doesn't just give you lung cancer
- It affects almost every organ in your body
- Some serious health problems are as follows:
 - Leukemia
 - Cataracts
 - Cancer
 - Pneumonia
 - Gum disease
 - Heart disease
 - Emphysema
 - Peptic ulcers
 - Aortic aneurysm (swelling of an artery)
 - Osteoporosis (weak bones)
 - Increased risk of wound infections after surgery
 - Problems getting pregnant and carrying a baby



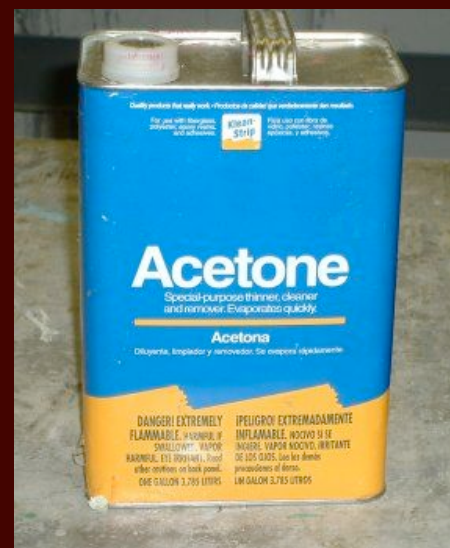
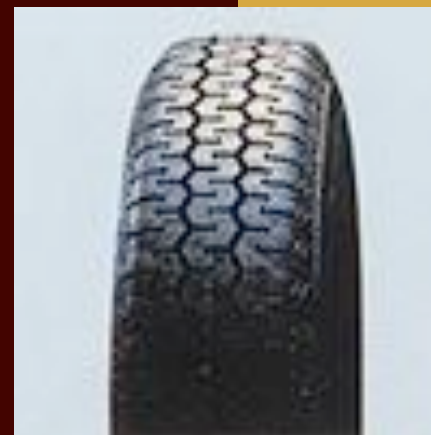
Tobacco

- Tobacco has more than 4,000 chemicals
- More than 60 known to cause cancer
- Some include ammonia, tar, arsenic, lead and carbon monoxide
- Smoking kills half a million people each year and is blamed for high number of all cancers
- Besides cancer, smoking can affect your body in many other ways.



Chemicals in Tobacco

- **Butadiene** is used to manufacture tires.
 - Irritation of the eyes, nasal passages, throat and lungs. Fatigue, headache, and vertigo.
- **Acetone** is used as a superglue remover.
 - Eyes and nose irritation



Chemicals Continued

- **Acroelin** used as pesticide to control algae, weeds and mollusks.
 - Upper respiratory tract irritation and congestion and eye irritation.
- **Ammonia** used in the production of liquid fertilizer solutions.
 - Can aggravate chronic respiratory conditions.



Chemicals Continued

- **Benzene** used in the production of many materials such as; some types of rubbers, lubricants, insecticides and solvents.
 - A substance declared toxic or carcinogen
- **Cadmium** used in black and white television phosphorus and in blue and green phosphorus for color TV tubes.
 - kidney damage, cancer of the lung and of the prostate.



Chemicals continued

- **Mercury** used in the production of mercury switches, batteries, catalysts, and insecticides.
 - Tremors, memory loss and kidney disease.
- **Selenium** used in photocells, light meters, solar cells, photocopying, and toning of photographs.
 - Irritation of the mucous membranes, pulmonary edema, bronchitis and bronchial pneumonia.



Lung Cancer

- Lung cancer is a disease in which cancer cells grow in the lungs
- The body stops making healthy cells and abnormal cells start growing
- These abnormal cells reproduce themselves and starts growing and dividing out of control over good cells
- This forms growths or tumors
- The word “cancer” refers to the meaning of “malignant tumors” that spread throughout the body system.



Causes

- Cigarette Smoking: carcinogens irritate and damage the cells in the lungs and airways.
- Second Hand Smoke
- Cigar and Pipe Smoking: cigar and pipe smokers have a higher risk of developing cancer than nonsmokers.
- Radon: is an “invisible, odorless, and tasteless radioactive gas” that occurs naturally in soil and rocks. It can cause harm to the lungs resulting in lung cancer.
- Asbestos: a natural but harmful fiber used in some working fields. Asbestos’ fibers can rupture and float in the air attaching to your clothes, and if inhaled, can cause “asbestosis” a lung disease.



Risk Factors

- Lung disease that causes scarring of the lung tissue
- Personal Lung Cancer History
- Pollution: living in highly polluted cities is similar to the risk associated with second hand smoke over a long period of time.
- Agents Encountered in Industrial Settings: Asbestos and Radon and other cancer causing agents (carcinogens). People at risk include workers being exposed to such chemicals.
- Age: risk increases by age 40.
- Gender: American men



Statistics and Risk Groups

- Lung Cancer reports higher increase in deaths among breast cancer, prostate cancer, and colon cancer.
- According to the Department of Health and Human Services in 2002: *100,099 males and 80,163 females were diagnosed with Lung Cancer. *90,121 males and 67,509 females died from Lung Cancer.
- Lung Cancer is the second type of cancer among males living in the United States, and the second most common cancer among White, American Indian and Alaska Native females. The third most common cancer ranks among Black, Asian, Pacific Islander and Hispanic females.

Treatment

- After the cancer has been found and diagnosed, a health care team will talk about the best treatment option for the patient
- Lung Cancer treatment can be administered using a single therapy method or in combination depending of the advancement of the tumor.
- Surgery: to remove cancerous lung tissue within the lung.
- Chemotherapy: primary Lung Cancer treatment, in combination with surgery. Chemotherapy is anticancer medication given directly into the vein or by mouth.
- *Radiation: high doses of radiation are given to exterminate cancer cells from outside of the body. This type of radiation therapy is applied on lung cancer patients whose health is fragile.



Prevention

lung cancer is the most preventable type of cancers

- Number one thing to do is not to smoke
- Fruits and vegetable more often- rich in antioxidants help repair damaged cells in your body system.
- Test your home- a tasteless, odorless gas occurs naturally in the soil. Your house might have been built in an exposed area.
- Avoid or limit exposure- chemicals such as gas, diesel, arsenic, vinyl or other type are consider carcinogens and can be a great risk for developing lung cancer.
- Run away from second hand smoke- carcinogens in cigarette smoke decrease healthy cell growth.

